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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/761,347
Filing Date: January 22, 2004
Appellant(s): OBA ET AL.

Stephen B. Parker
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 25th, 2008, and the supplemental appeal brief filed April 10th, 2008, appealing from the Office action mailed May 22nd, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal:

Boden et al. (U.S. PGPub 2003/0145104), published on July 31st, 2003.

Sakov et al. (U.S. PGPub 2002/0196802), published on December 26th, 2002.

Forsslöw (U.S. PGPub 2002/0069278), published on June 6th, 2002.

Le et al. (U.S. PGPub 2004/0019664), published on January 29th, 2004.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5, 9, 10, 13, 17, 18, 20, 21, and 25-27 rejected under 35

U.S.C. 102(e) as being anticipated by *Boden et al.* (U.S. PGPub 2003/0145104, hereinafter "*Boden*").

3. As per claim 1, *Boden* teaches a method of dynamically connecting a client node to a serving network, comprising the steps of:

providing an access network to which a client node has a network connection;
(*Boden*, fig. 4 item 42 and Node A1)

providing at least one access router having a network connection to said access network and having a network connection to at least one serving network; (*Boden*, paragraph 0039; see fig. 4 item 52)

sending serving network provider advertising information to said client node;
receiving from said client node serving network provider information specifying a serving network to which said client node desires access; and (*Boden*, paragraphs 0062-0072)

establishing a communication tunnel between said client node and said access router through said access network, such that said client node is able to send and receive data packets to and from the serving network specified by said client node within said communication tunnel through said access network (*Boden*, paragraphs 0073-0076; fig. 5 and 12).

4. As per claim 2, *Boden* teaches the system comprising the step of authenticating said client node prior to establishing said communication tunnel (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPsec).

5. As per claim 5, *Boden* teaches the system further wherein said access router has network connections to at least two serving networks, said method further comprising the step of establishing a second communication tunnel between said client node and said access router through said access network, such that said client node is able to selectively send and receive data packets to and from each of said two serving networks (*Boden*, paragraph 0039 and fig. 4).

6. As per claim 9, *Boden* teaches the system further wherein said at least one serving network comprises an Internet Service Provider network (*Boden*, paragraph 0078-0081 where the gateway of fig. 4 has access to sites other than other listed remote VPNs).

7. As per claim 10, *Boden* teaches the system further wherein said at least one serving network comprises a Network Access Provider network (*Boden*, paragraph 0078-0081 where the gateway of fig. 4 has access to sites other than other listed remote VPNs).

8. As per claim 13, *Boden* teaches the system further wherein said access network comprises an IP access network (*Boden*, paragraphs 0034-0038).
9. As per claim 17, *Boden* teaches the system further wherein said client node connects to said access network via a remote network (*Boden*, fig. 4 item 42).
10. As per claim 18, *Boden* teaches the system further wherein the step of establishing said communication tunnel comprises the step of using an IPSec key management protocol (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPSec).
11. As per claim 20, *Boden* teaches the system further wherein said communication tunnel is a secure communication tunnel (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPSec).
12. As per claim 21, *Boden* teaches the system comprising the step of establishing said secure communication tunnel using an IPSec key management protocol (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPSec).
13. As per claim 25, *Boden* teaches a method of connecting a client node to a serving network, comprising the steps of:

providing an access router having a network connection to at least two serving networks; (*Boden*, paragraph 0039; see fig. 4 item 52)

receiving from said client node serving network information specifying a serving network to which said client node desires to have access; (*Boden*, paragraphs 0062-0072)

establishing a communication tunnel between said client node and said access router through said access network, such that said client node is able to send and receive data packets to and from the serving network specified by said client node within said communication tunnel through said access network; and (*Boden*, paragraphs 0073-0076; fig. 5 and 12)

binding said communication tunnel to said specified serving network by using serving network information of said specified serving network as a security association identifier of said communication tunnel (*Boden*, paragraph 0044 and figure 9 SA identifier).

14. As per claim 26, *Boden* teaches the system further wherein said communication tunnel is a secure communication tunnel (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPsec).

15. As per claim 27, *Boden* teaches the system further comprising the step of establishing said secure communication tunnel using an IPSec key management protocol (*Boden*, paragraphs 0050-0052 and fig. 9, through the use of IPsec).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Boden et al.* (U.S. PGPub 2003/0145104) and *Sakov et al.* (US PGPub 2002/0196802, hereinafter "*Sakov*").

18. As per claim 3, *Boden* teaches the above yet fails to teach the system comprising the step of providing a second access router having a network connection to said access network and having network connections to at least two serving networks.

Sakov teaches the use of multiple access routers having network connections to an original access network and multiple serving networks (*Sakov*, paragraph 0029-0035).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Sakov* to provide the access routers of *Sakov* in the system of *Boden*, because doing so would allow the aggregation of any excessive routers and would increase performance (*Sakov*, paragraphs 0013-0015).

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19. Claims 8, 11, 12, 14-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Boden et al.* (U.S. PGPub 2003/0145104) and *Forslöv* (U.S. PGPub 2002/0069278, hereinafter "*Forslöv*").

20. As per claim 8, *Boden* teaches the above yet fails to teach wherein said step of sending serving network provider advertising information comprises the step of using a Router Discovery mechanism.

Forslöv teaches authenticating clients prior to establishing IPsec secure communication tunnels (*Forslöv*, paragraphs 0093 and 0108) in a wireless VLAN network (*Forslöv*, paragraph 0094) that utilizes a Router Discovery mechanism (*Forslöv*, claim 85).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Forslöv* to provide the networking system of *Forslöv* in the system of *Boden*, because doing so would enable the benefits of a mobile virtual private network providing secure client data access in an IPsec based system (*Forslöv*, paragraph 0065).

21. As per claim 11, *Boden* teaches the above yet fails to teach wherein said at least one serving network comprises a VLAN network.

Forslöv teaches authenticating clients prior to establishing IPsec secure communication tunnels (*Forslöv*, paragraphs 0093 and 0108) in a wireless VLAN network (*Forslöv*, paragraph 0094).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Forsl w* to provide the networking system of *Forsl w* in the system of *Boden*, because doing so would enable the benefits of a mobile virtual private network providing secure client data access in an IPsec based system (*Forsl w*, paragraph 0065).

22. As per claim 12, *Boden-Forsl w* teaches the system further comprising the step of providing a virtual access point in said VLAN serving network, through which a client node may connect directly to said VLAN serving network (*Forsl w*, paragraph 0094).

23. As per claim 14, *Boden* teaches the above yet fails to teach wherein said access network comprises a VLAN access network.

Forsl w teaches authenticating clients prior to establishing IPsec secure communication tunnels (*Forsl w*, paragraphs 0093 and 0108) in a wireless VLAN network (*Forsl w*, paragraph 0094).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Forsl w* to provide the networking system of *Forsl w* in the system of *Boden*, because doing so would enable the benefits of a mobile virtual private network providing secure client data access in an IPsec based system (*Forsl w*, paragraph 0065).

24. As per claim 15, *Boden-Forsl w* teaches the system further wherein said VLAN access network is partitioned into multiple VLAN access sub-networks (*Forsl w*, paragraph 0104).

25. As per claim 16, *Boden-Forsl w* teaches the system further comprising the step of providing a virtual access point in said VLAN access network, through which a client node may connect to said VLAN access network (*Forsl w*, paragraph 0094).

26. As per claim 19, *Boden* teaches the above yet fails to teach wherein said client node is a mobile node, and said network connection of said client node to said access network is a wireless connection.

Forsl w teaches authenticating clients prior to establishing IPsec secure communication tunnels (*Forsl w*, paragraphs 0093 and 0108) in a wireless VLAN network (*Forsl w*, paragraph 0094).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Forsl w* to provide the networking system of *Forsl w* in the system of *Boden*, because doing so would enable the benefits of a mobile virtual private network providing secure client data access in an IPsec based system (*Forsl w*, paragraph 0065).

27. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Boden et al.* (U.S. PGPub 2003/0145104) and *Le et al.* (US PGPub 2004/0019664, hereinafter "*Le*").

28. As per claim 7, *Boden* teaches the above yet fails to teach wherein said step of sending serving network provider advertising information comprises the step of using a PANA protocol.

Le teaches the use of a PANA protocol in advertising network elements (*Le*, paragraphs 0039-0044).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined *Boden* and *Le* to provide the PANA protocol of *Le* in the system of *Boden*, because doing so would enable PANA based advertisements.

(10) Response to Argument

In the Argument, appellant argued in substance that

(A) In the *Boden* reference, a tunnel is a VPN connection between access routers and not between a client node and an access router. Accordingly, the VPN tunnel in *Boden* resides outside of any of the access networks whereas the tunnel in the present application resides within an access network.

As to point (A), the relevant claim language states “establishing a communication tunnel between said client node and said access router through said access network, such that said client node is able to send and receive data packets to and from the serving network specified by said client node within said communication tunnel through said access network.” Thus, the claim requires that a client send and receive data packets through a communication tunnel through an access network.

Boden teaches an access network to which a client has a network connection that provides an access router with an access network and serving network (see the network structure of fig. 4 and paragraph 0039). If the client node initiates a connection, a communication tunnel is established where the client node is able to send and receive data packets to the specified destination (*Boden*, see fig. 13 steps 188-194 where the advertising information in step 181 is forwarded to node A1 to establish the connection). A tunnel is established between the client and access router such that the client is able

to send data to and from the serving network specified within said communication tunnel (*Boden*, paragraphs 0073-0076; figs. 5 and 12; see also use of AH, ESP, and other header information in paragraph 0062).

As to the argument regarding the location of the tunnel, *Boden* shows an example network in fig. 4. The Node A1 47 in fig. 4 would transmit data packets through VPN Gateway A 52 and VPN Gateway B 54 in order to reach Node 48 of Network B. If the tunnel is established between Gateway 52 and 54, then the tunnel is still "established between said client node and said access router" (emphasis added) as per the language of the claims. Further, no evidence is offered as to how the tunnel in *Boden* exists outside of an access network when the entire network implementation in *Boden* is designed to provide access to client nodes (see, e.g., fig. 4 architecture and using a reasonable interpretation of "access network" to constitute a network that provides communication access).

(B) *Boden* fails to teach sending serving network provider advertising information to said client node. At best, *Boden* sends a new source IP address that provides no information regarding the serving network, let alone serving network provider information. The address is selected from a pool at the receiving gateway of reserved IP addresses, so there is no way for the receiving client to assess anything about the serving network provider based on the address.

As to point (B), the claim language requires the transmission of "serving network provider advertising information" to a client. Given a reasonable interpretation of this language, the system must send some form of information that advertises a network that provides service.

Boden teaches an incoming IPsec'd packet 100 containing network provider information (i.e., advertising) that is received at the access router (*Boden*, paragraph 0062). The access router, in order to avoid conflict due to overlapping remote address spaces, may make modifications to the incoming advertisement information so that conflicts do not occur on the destination network (see *Boden* paragraphs 0062-0072 and the connection process detailed in Table 3 where gateway A modifies the advertisement information to be compatible with node A1's network). The access router then allows this information to continue on to the client node. The client node responds if a connection is desired, and if so, a communication tunnel is established where the client node is able to send and receive data packets to the desired destination (*Boden*, see fig. 13 steps 188-194 where the advertising information in step 181 is forwarded to node A1 to establish the connection).

While in certain situations *Boden's* system may make modifications (see paragraph 0062 where a check is done to determine if source-in is necessary), the claim language is directed to *sending* information to a client node without limitation on the changes made during transmission. Further, no structure or definition is given in the independent claim language as to the *type* of advertising information that must be sent to the client node.

(C) The final rejection mailed May 22nd, 2007, was improperly made final because it contained a new ground of rejection. The fact that a typographical error was made was not apparent to the appellant.

As to point (C), the non-final office action mailed December 21st, 2006, rejected the claims under 35 U.S.C. §102 using the *Boden* reference. The subsequent final office action also rejected the claims under 35 U.S.C. §102 using the *Boden* reference. No new grounds of rejection were applied.

A typographical error was made in the first office action listing subsection (b) as the relevant basis of §102 when in fact subsection (e) contained the proper text. This was noted and corrected in the final office action. As to the argument that this was not apparent to the appellant, the examiner respectfully submits that the response to the non-final office action contained substantive arguments concerning the merits of the *Boden* reference as a valid 102(e) anticipatory reference (see March 21st, 2007 response, pgs. 5-7). Therefore, any potential error was harmless.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

/N. T./

Nicholas Taylor

Examiner, Art Unit 2141

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